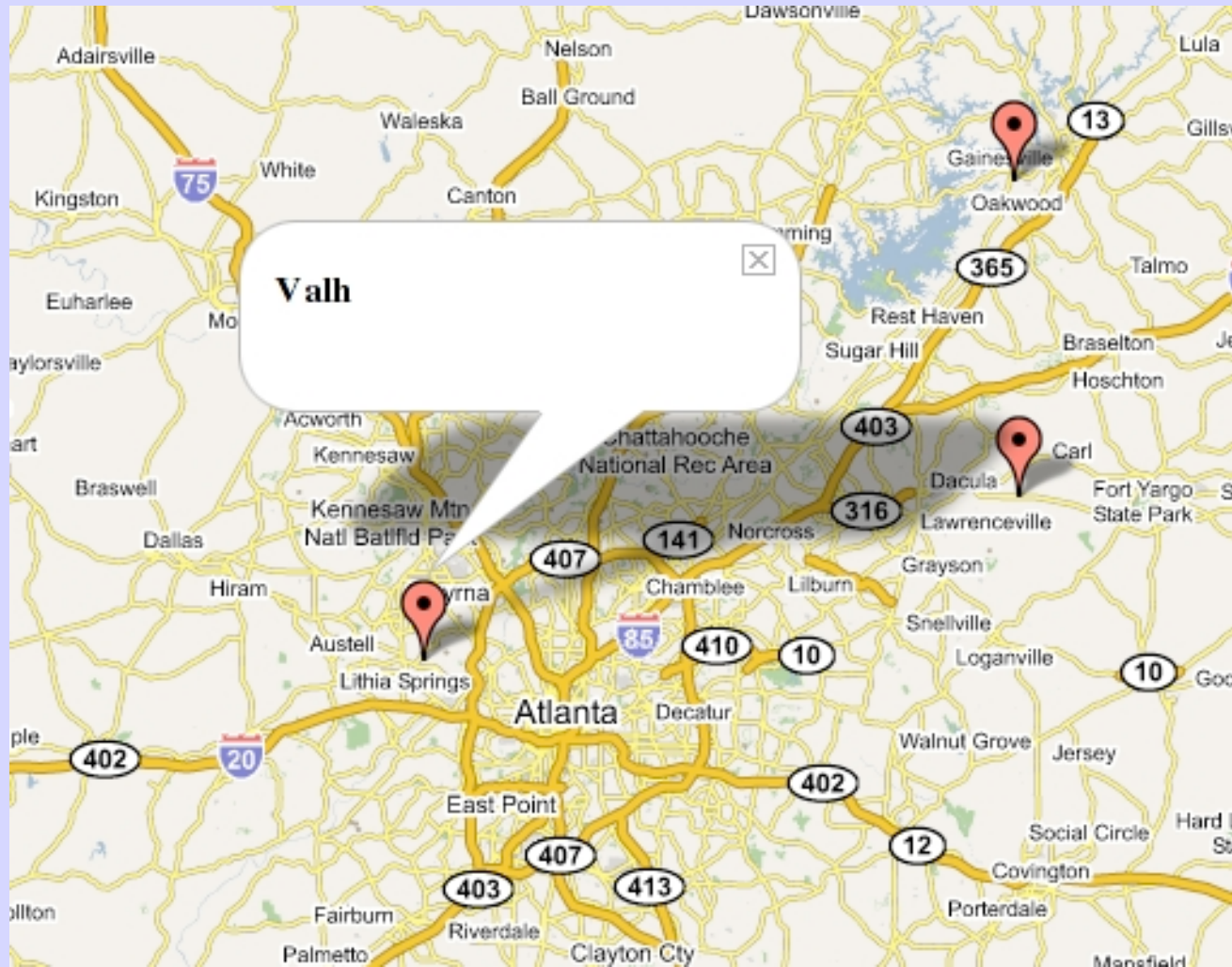


# Google Maps: A Short How-to



# *First things first...*

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Need an API key from Google



Sign up at [www.google.com/apis/maps](http://www.google.com/apis/maps)



Must have a Google account

# *How does it work?*

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 Javascript embedded in webpages

 Dangers of Javascript:

 It will let you do anything!

 No variable typing

```
var x = 6;
```

```
x + 4 => 10
```

```
x + "xyz" => "6xyz"
```

 Hard to debug

# *In your code...*

---

1. Collect location data
2. Output an HTML page with embedded Javascript
3. Launch a web browser from Jython and load your new webpage

```
import os.system  
os.system("/usr/bin/firefox http://www.google.com")
```

# *Basic HTML code*

---



## Basic file structure

```
<html>
  <head>
    title, meta information
  </head>

  <body>
    main html code goes here
    javascript with Google Map
  </body>

</html>
```

# *Step by step example – page 1*

---

 Key goes in header of HTML file

```
<html>
  <head>
    <script
src="http://maps.google.com/maps?file=api&v=1&key=YOUR.KEY.HERE"
type="text/javascript"></script>
  </head>
```

# Step by step example – page 2

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In the body of the code, set width and height of map and add Javascript

```
<html>
.
.
.
<body>
  <div id="map" style="width: 80%; height: 100%">
  </div>

  <script type="text/javascript">
    YOUR SCRIPT HERE
  </script>
</body>
</html>
```

# *Creating a map*

---

```
<script type="text/javascript">

// Create new map
  var map = new Gmap(document.getElementById("map"));
// add a zooming control to the map
  map.addControl(new GSmallMapControl());
// center the map on atlanta (lat/long) and set level
// of zoom
  map.centerAndZoom(new GPoint(-84.3891,33.7534), 8);
// add control for scale (eg 1 cm = 1 mile)
  map.addControl(new GScaleControl());

// then we can put things on the map!
</script>
```

# *Creating points on your new map:*

---





```
// Function: createMarker
// input: latitude coord, longitude coord, name
// output: marker added to map with EventListener for click on icon
function createMarker(lat,lon,id) {
    var point = new GPoint(lat,lon);
    var marker = new GMarker(point);
    map.addOverlay(marker);

    // note HTML formatting of text
    var txt = "<b>" + id + "</b>";
    GEvent.addListener(marker, 'click', function() {
        marker.openInfoWindowHtml(txt);
    });
}

// let's create three points!
createMarker(-84.5530,33.8161, "Valh");
createMarker(-83.8738,33.9712, "Keith");
createMarker(-83.8786,34.2704, "user6");
```








# Hints

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-  Go slow!
-  Incremental steps
-  Reload often!
-  Be careful with Javascript!

# *Fun extras*

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-  Create different icons / incorporate pics
-  Tie into other Google APIs
  -  Google Local
    -  Driving Directions
    -  Points of interest within X miles
  -  Froogle
  -  Google Earth

# Resources

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 Beginner tutorial:

 [www.econym.demon.co.uk/googlemaps/](http://www.econym.demon.co.uk/googlemaps/)

 Discussion forums:

 [groups.google.com/group/Google-Maps-API](http://groups.google.com/group/Google-Maps-API)

 Map Wiki:

 [www.mapki.com/index.php?title=Main\\_Page](http://www.mapki.com/index.php?title=Main_Page)

(Good examples under 'Map Projects' in sidebar)